

Prevalence of postpartum depression among women in Bagalkot district of Karnataka

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Abstract : The postpartum period, which starts from one hour after delivery and is of duration of 42 days, is critical for the health of both mother and child where women experience various physical, mental, and emotional changes. Hence, prevalence of postpartum depression was studied on a sample of 130 mothers in the age group of 21-40 years, post delivery 10 days to three months. The sample was drawn from the rural and urban areas of Mudhol and Jamakhandi taluks of Bagalkot district during 2020 – 2021. Mothers were screened using Edinburgh postnatal development scale and SES was measured by Agarwal SES tool, 2005. The results revealed that the overall prevalence rate of postpartum depression was 12.30 per cent, where as urban mothers showed quite high (8.50%) rate of postpartum depression prevalence than rural (3.80%) mothers. Also prevalence of postpartum depression was high among mothers who were home makers (10%) in comparison with working mothers (2.30%). Mothers who were living in urban area had higher prevalence rate of depression (8.50%) than mothers living in rural area (3.80%).

Key words: Home makers, Postpartum depression, Rural, SES, Urban

Introduction

Women during pregnancy and first year after birth are vulnerable to mental disorders. Postnatal mental health refers to a woman's mental health during pregnancy and the first year after birth. This includes mental health difficulties existing before pregnancy, as well as mental health problems that develop for the first time, or are greatly exacerbated in the perinatal period. Depression and anxiety are the most common mental health problems during pregnancy, with approximately 12 per cent of women experiencing depression and 13 per cent experiencing anxiety at some point, with many women experiencing both. Depression and anxiety also affect 15-20 per cent of women in the first year after birth (NICE guidelines, 2014 and Bauer *et al.*, 2014).

The postpartum period, which starts from one hour after delivery and is of duration of 42 days, is critical for the health of both mother and child. Women experience various physical, mental, and emotional changes during this postpartum period, which may interfere with their daily routine and care giving for their infants (Batt *et al.*, 2020). Postpartum depression (PPD), also called postnatal depression, is a type of mood disorder associated with childbirth. Onset is typically between one week and one month following childbirth. ("Postpartum Depression Facts", NIEPID (2017). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition of the American Psychiatric Association defines postpartum depression (PPD) as the most recent episode of severe depression if onset of mood symptoms begins during pregnancy or in the four weeks following child birth. The most common psychiatric illness associated with pregnancy is postpartum depression (PPD).

The global prevalence of postpartum depression has been estimated as 100 -150 per 1000 births. The effects of postnatal depression on the mother, her marital relationship, and her

children make it an important condition to diagnose, treat and prevent (Stewart *et al.*, 2003). According to research approximately 10–15 per cent of women worldwide suffer with PPD (Arifin *et al.* 2018; Klainin *et al.*, 2009 and Upadhyay *et al.*, 2017). Prevalence of postpartum depression is thought to be twice as common in developing nations as they are in developed countries, yet they are underexplored (Gajaria and Ravindran. 2018). According to a comprehensive review, 22 per cent of Indians suffer with PPD and prevalence range from 3 to 47 per cent (Shriram *et al.* 2019 ; Agarwala *et al.*, 2019 and Upadhyay *et al.*, 2017).

Material and methods

The sample of the study included a total of 130 women from two villages each from Mudhol and Jamkhandi taluks of Bagalkot district; among them 72 women belonged to rural area and 58 women belonged to urban area. Initially all 130 women were screened for postpartum depression using EPDS tool. Based on the EPDS scores the prevalence of post partum depression was calculated and women were categorized as depressed and non depressed.

Tools used for assessment

1. Self structured questionnaire

A self structured questionnaire was developed to elicit the demographic information and personal characteristics about mother and the infant. Demographic information like name, age, education, occupation, locality, religion, caste, type of family, size of family, husbands age, husbands education, husbands occupation and total income of the family from all the sources.

2. Edinburgh Postnatal Depression Scale (EPDS)

by Cox *et al.*(1987)

Edinburgh Postnatal Depression Scale is a screening tool that consists of 10 questions. Responses are scored as 0, 1, 2,

or 3 according to increased severity of the symptom. The total score is determined by adding together the score for each of the 10 items. Mothers who scored <13 were categorized as non-depressed and who scored 13 -30 were categorized as depressed.

Results and discussion

The demographic characteristics of the mothers selected for the study is presented in Table 1.1. With respect to the age, 30 per cent of the mothers were between 21-25 years, 40 per cent were between 26 to 30 years and 29 per cent of the women were between 31 to 35 years of age. With regard to the age at marriage of the participants, 31.50 per cent of mothers were

between 18 to 21 years, 30 per cent were between 22 to 25 years and 38.50 per cent were in 26 to 29 years age group at the time of their marriage. With respect to the number of years of marriage 36.10 per cent had completed 2 to 3 years of their marriage, 33.40 per cent had completed 3-4 years of their marriage and 30.50 per cent had completed 4 to 5 years of their marriage. Regarding education 19.30 per cent were illiterate, 19.40 per cent completed their primary education, 36.60 per cent had secondary education, 17.60 per cent completed PUC and diploma, and 3.80 per cent and 3.30 per cent participants completed graduation and post graduation respectively. Majority of mothers were homemakers (78.50%) and only 21.50 per cent mothers were working.

Table 1.1 Distribution of postpartum mothers based on demographic characters.

| Characteristics | Category | Frequency | Percentage | N=130 |
|-------------------------------------|-----------------|-----------|------------|-------|
| Age | 21-25 years | 39 | 30.00 | |
| | 26-30 years | 53 | 40.70 | |
| | 31-35 years | 38 | 29.30 | |
| | Total | 130 | 100.00 | |
| Age at marriage | 18-21 years | 41 | 31.50 | |
| | 22-25 years | 39 | 30.00 | |
| | 26-29 years | 50 | 38.50 | |
| | Total | 130 | 100.00 | |
| Number of years of marriage | 2-3 years | 47 | 36.10 | |
| | 3-4 years | 43 | 33.40 | |
| | 4-5 years | 40 | 30.50 | |
| | Total | 130 | 100.00 | |
| Education | Illiterate | 25 | 19.30 | |
| | Primary | 25 | 19.40 | |
| | Secondary | 48 | 36.60 | |
| | PUC and Diploma | 23 | 17.60 | |
| | Graduation | 5 | 3.80 | |
| | Post graduation | 4 | 3.30 | |
| | Total | 130 | 100.00 | |
| Occupation | Homemaker | 102 | 78.50 | |
| | Working | 28 | 21.50 | |
| | Total | 130 | 100.00 | |
| Religion | Hindu | 87 | 66.90 | |
| | Muslim | 20 | 15.50 | |
| | Jain | 23 | 17.60 | |
| | Total | 130 | 100.00 | |
| Caste | General | 36 | 27.70 | |
| | SC | 44 | 33.80 | |
| | ST | 9 | 6.90 | |
| | OBC | 41 | 31.60 | |
| | Total | 130 | 100.00 | |
| Type of family | Nuclear | 66 | 50.70 | |
| | Joint | 64 | 49.30 | |
| | Total | 130 | 100.00 | |
| Size of the family | 1-5 | 66 | 50.70 | |
| | 6-10 | 25 | 19.30 | |
| | More than 10 | 39 | 30.00 | |
| | Total | 130 | 100.00 | |
| Socio economic status of the family | Upper high | 9 | 6.90 | |
| | High | 41 | 31.50 | |
| | Upper middle | 28 | 21.50 | |
| | Lower middle | 38 | 29.20 | |
| | Poor | 14 | 10.70 | |
| | Total | 130 | 100.00 | |

Prevalence of postpartum depression

Majority of the mothers belonged to Hindu religion (66.90%) followed by Jain (17.60%) and Muslims(15.50%). With respect to the caste, 22.70 per cent belong to general category, 33.80 per cent and 6.90 per cent were SC and ST respectively and 31.60 per cent belonged to OBC category. With respect to the type of family, majority belonged to nuclear family (50.70%) followed by joint family (49.30%). Whereas with regard to the size of the family, half of the participants (50.70%) were living with 1 to 5 family members, 19.30 per cent were living with 6 to 10 family members and 30.00 per cent of the participants were living with more than 10 family members. With respect to the socio economic status of the families 31.50 per cent respondents belonged to high SES followed by 29.20 per cent lower middle SES, 21.50 per cent upper middle SES, 10.70 per cent and 6.90 per cent belong to poor and upper high SES category respectively.

Prevalence of postpartum depression among mothers is described with respect to age of the mother, age at marriage, education, occupation, locality, socio- economic status, gender of the infant, parity and consanguinity.

Fig 1 shows, the overall prevalence of postpartum depression among mothers. The overall prevalence was found to be 12.30 per cent and it is evident that prevalence was quite high among the urban (8.50%) mothers than rural (3.80%) mothers. Similar results were also reported in Gujarat, India by Nimisha *et al.* (2012) where the prevalence rate was 12.50 per cent, by Hirani *et al.* (2015) in Ahmedabad,(12%) and by Shrestha *et al.* (2015) in New Delhi which showed the prevalence rate of 12 per cent.

Table 1.2 shows the prevalence of postpartum depression among mothers. Over all 130 mothers were screened for postpartum depression. The results indicated that overall prevalence rate is 12.30 per cent (16 out of 130).The prevalence rate with respect to the age of the mothers indicated that 4.60 per cent mothers in the age group of 31-35 years were found depressed and 3.80 per cent each were found in the age group of 21-25 years as well as in 26-30 years. With respect to age at marriage 4.60 per cent each were depressed who were between 18 to 21 years and 26 to 29 years at the time of marriage and 3.10 per cent mothers were depressed who were 22 to 25 years at the time of marriage. This finding is in line with the study conducted by Cantilino *et al.* (2010), Muraca *et al.* (2014) which showed

women with advanced maternal age (>30 years) had significantly higher risk of postpartum depression than younger mothers.

Majority of the mothers who completed their primary education were depressed (3.80%) followed by PUC and diploma education (3.10%) and 2.30 per cent each were found in secondary and illiterate groups. Prevalence of postpartum depression was high among mothers who were home makers (10%) in comparison with working mothers (2.30%). Mothers who were living in urban area had higher prevalence rate of depression (8.50%) than mothers living in rural area (3.80%).

Table 2.1. Prevalence of postpartum depression among mothers. N=130

| variables | Postpartum depression | | | |
|-----------------------|-----------------------|------------|---------------|------------|
| | Depressed | | Non depressed | |
| | Frequency | Percentage | Frequency | Percentage |
| Age of the mother | | | | |
| 21-25 | 5 | 3.80 | 34 | 26.20 |
| 26-30 | 5 | 3.80 | 48 | 36.90 |
| 31-35 | 6 | 4.60 | 32 | 24.60 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Age at marriage | | | | |
| 18-21 | 6 | 4.60 | 35 | 26.90 |
| 22-25 | 4 | 3.10 | 35 | 26.90 |
| 26-29 | 6 | 4.60 | 44 | 33.80 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Education | | | | |
| Illiterate | 3 | 2.30 | 22 | 16.90 |
| Primary | 5 | 3.80 | 20 | 15.40 |
| Secondary | 3 | 2.30 | 45 | 34.60 |
| PUC and Diploma | 4 | 3.10 | 19 | 14.60 |
| Graduation | 1 | 0.80 | 4 | 3.10 |
| Post graduation | 0 | 0.00 | 4 | 3.10 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Occupation | | | | |
| Homemaker | 13 | 10.00 | 89 | 68.50 |
| Working | 3 | 2.30 | 25 | 19.20 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Locality | | | | |
| Rural | 5 | 3.80 | 67 | 51.5 |
| Urban | 11 | 8.50 | 47 | 36.2 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Socio economic status | | | | |
| Upper high | 2 | 1.50 | 7 | 5.40 |
| High | 3 | 2.30 | 38 | 29.20 |
| Upper middle | 2 | 1.50 | 26 | 20.00 |
| Lower middle | 8 | 6.20 | 30 | 23.10 |
| Poor | 1 | 0.80 | 13 | 10.00 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Gender of the infant | | | | |
| Male | 6 | 4.60 | 60 | 46.20 |
| Female | 10 | 7.70 | 54 | 41.50 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Parity | | | | |
| Primiparity | 6 | 4.6 | 58 | 44.60 |
| Multiparity | 10 | 7.70 | 56 | 43.10 |
| Total | 16 | 12.30 | 114 | 87.70 |
| Consanguinity | | | | |
| Yes | 2 | 1.5 | 33 | 25.4 |
| No | 14 | 10.8 | 81 | 62.3 |
| Total | 16 | 12.30 | 114 | 87.70 |

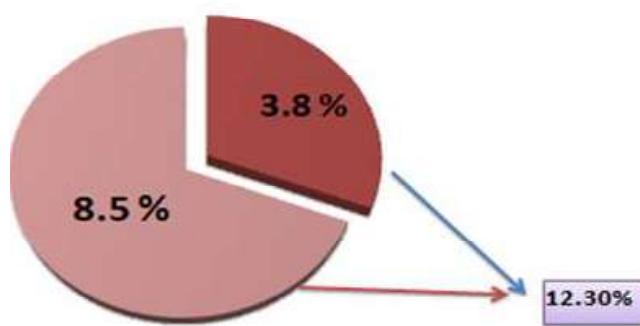


Fig 1 : Overall prevalence of postpartum depression.

Results of Vigod *et al.* (2013) revealed significantly high risk of postpartum depression symptoms among urban mothers than mothers living in rural areas.

When socio economic status of mothers was considered, 6.20 per cent belonged to lower middle class followed by high SES (2.30%), upper high SES (1.50%), upper middle class (1.50%) and poor (0.80%) category. This finding is supported by the studies conducted by Goyal *et al.* (2010) and Gebregziabher *et al.* (2020) which showed that the mothers who belong to low socio economic status were in a high risk category

of postpartum depression. The prevalence of postpartum depression among women with female infant was 7.70 per cent and it was 4.60 per cent among women who had male infant. With respect to parity mothers who gave two or more births had high prevalence rates (7.70%) of postpartum depression in comparison with first time mothers (4.60%). Regarding consanguinity, mothers with non-consanguineous marriage had 10.80 per cent prevalence rate where as mothers with consanguineous marriage had 1.50 per cent prevalence rates of post partum depression.

Conclusion

The overall prevalence of postpartum depression was 12.30 per cent in the current study. The prevalence was high among mothers with advanced age group, who completed their primary education, homemakers, living in urban area and mothers who belong to lower middle class. Prevalence of postpartum depression was high among mothers of advanced age group (31-35 years) and who got married between 18 to 21 years. Hence the awareness regarding proper age for marriage and childbearing among mothers play a vital role in reducing the incidents of postpartum depression. Mothers with female infants had high prevalence of postpartum depression supporting the patriarchal attitude in the society. This indicated the need to address the issue of gender equality and acceptance of girl child among the family members.

References

Agarwala A, Rao P A and Narayanan P, 2019, Prevalence and predictors of postpartum depression among mothers in the rural areas of Udupi Taluk, Karnataka, India: A cross-sectional study. *Clinical Epidemiology and Global Health*, 7 (3):342–345.

Arifin S R M, Cheyne H and Maxwell M, 2018, Review of the prevalence of postnatal depression across cultures. *AIMS Public Health*, 5:260–295.

Batt M M, Duffy K A, Novick A M, Metcalf C A and Epperson C N, 2020, Is Postpartum depression different from depression occurring outside of the perinatal period? A review of the evidence. *American Journal of Psychiatry Publication*, 18(2):106-119.

Bauer A, Parsonage M, Knapp M, Lemmi V and Adelaja B, 2014, The Costs of Perinatal Mental Health Problems, London. *Centre for Mental Health and London School of Economics*, pp.11-22.

Cox L J, Holden J M and Sagovsky R, 1987, Edinburgh Postnatal Depression Scale (EPDS). *British Journal of Psychiatry*, 150:782-786.

Gajaria A and Ravindran A V, 2018, Interventions for prenatal depression in low and middle-income countries: A systematic review. *Asian Journal of Psychiatry*, 37:112-120.

Klainin P and Gordon D, 2009, Postpartum depression in Asian cultures : a literature review. *International Journal of Nursing Studies*, 46:1355–1373.

National Institute for Health and Care Excellence, 2014, Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance. *NICE*, pp. 26-30

Postpartum depression”, 2019, womenshealth.gov. *Postpartum Depression Facts*, NIMH, 2017. www.nimh.nih.gov/health-publications/perinatal-depression.

Shriraam V, Badamilal P S, Anitha M R and Sathiyasekaran B W C, 2019, A community-based study of postpartum depression in rural Southern India. *Indian Journal of Social Psychiatry*, 35(1):64-38.

Stewart D E, Robertson E, Dennis C L, Grace S L and Wallington T, 2003. Postpartum depression: Literature review of risk factors and interventions. *University Health Network Women's Health Program*, pp 1-10.

Upadhyay R P, Chowdhury R, Salehi A, Sarkar K, Singh S K, Sinha B, Pawar A, Rajalakshmi A K and Kumar A, 2017, Postpartum depression in India: a systematic review and meta-analysis. *Bulletin of the World Health Organization*, 95(10), 706-717.